



Illinois Groundwater Association Fall 2010 Newsletter

Advancing Groundwater Knowledge Since 1983

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August 2010

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From The Chair

Our Fall 2010 meeting is just around the corner. This year, our Fall meeting will be held at the NIU Hoffman Estates Campus. We will have many interesting and informative presentations as well as breaks and a long lunch for discussions, networking, and catching up with friends. Presentation topics include management of water resources, public water supply safety, environmental studies, investigation methodology, and how geology has influenced development in the Chicago area. Details regarding the fall meeting are on page 7.



The Executive Committee has also organized a couple of additional activities that we hope many of you will attend. First, immediately following our meeting, all meeting attendees and members of the Association are invited to a social event at Claim Jumpers Restaurant in Hoffman Estates (only a few blocks from the campus). The social event will be a great time to meet new people and get to know your fellow members.

Secondly, we have teamed with the Illinois-Indiana Section of the AIPG to offer a one-day field trip on Saturday September 25th, the day after the meeting. This field trip will be a guided tour of the Chicago area with Michael Chrzastowski of the ISGS. The bus will take attendees to various locations throughout the Chicago area to see first-hand how the geology of the area has influenced the development of Chicago and the surrounding areas. More information on this field trip is presented in the newsletter on pages 3 and 10.

Those of you who attended our Spring meeting at the Morton Arboretum likely noticed that attendance was not what anyone had hoped it would be. We continue to reach out to as many people and organizations that we can think of to encourage both membership and participation in the IGA, but I feel that the best way to increase our attendance is for the existing members to reach out to fellow groundwater professionals and students and invite them to our meetings. I would ask that each of you take a few minutes to think of one or two people who may be interested in what the IGA has to offer and invite them to this meeting.

Steven Kroll

2010 Illinois Groundwater Association Chair

Fall 2010 IGA Meeting at NIU-Hoffman Estates

The Illinois Groundwater Association is holding its Fall 2010 Association meeting on Friday, September 24th at the Northern Illinois University Hoffman Estates campus. This campus is just outside of Chicago and 18 miles west of O'Hare Airport. The Conference Center specializes



NIU Hoffman Estates Campus

in corporate events and has full AV facilities, WiFi, and new meeting rooms. The NIU-Hoffman Estates web site has information on parking, directions, and facilities: <http://www.niu.edu/conferenceCenters/locations/hoffmanestates/index.shtml>.

In addition to our slate of excellent speakers (see the Agenda on page 7) we will be featuring a presentation by Mike Chrzastowski of the ISGS on the coastal geology of the Chicago area. We are pleased that Mike will host a field trip on coastal geology on Saturday September 25th, which is noted below with a feature article on page 10. We haven't featured a field trip in several years, so this is a nice change of pace. The Illinois-Indiana Section of the American Institute of Professional Geologists organized the event, and the IGA coordinated with them so that our fall meeting would both feature Mike's presentation with the field trip on the subsequent day.

We're also trying something new – a Happy Hour after the IGA meeting from 4 pm to 7 pm at Claim Jumpers, which is a few minutes away at 2610 Sutton Rd. IGA meeting attendees always enjoy catching up with colleagues and friends - there never seems to be enough time during breaks or lunch. A happy hour should do the trick. And those who are staying overnight for the coastal geology field trip on Saturday can join us.

Spring 2010 IGA Meeting at Morton Arboretum

The spring 2010 IGA meeting was held at Morton Arboretum in Lisle, Illinois. As always the facilities were terrific, and who can argue with 1,700 acres of woodland, prairie, ponds, and streams? We had lunch on a perfect spring day on an overlook for an expansive field surrounded by majestic trees!

James Adamson of V3 Companies gave a presentation on groundwater development in Haiti, which was sobering because of the devastating earthquake in January 2010. Al Wehrmann of the ISWS gave an overview of the recent groundwater supply and demand evaluation for northeastern Illinois (see page 12). Colin Booth of NIU gave an update of longwall coal mining in southern Illinois, groundwater, and groundwater modeling. And Jerry Dalsin provided a regulatory update on well contamination, the IDPH water well program, and proposed changes to the water well code.

ILLINOIS-INDIANA SECTION OF THE AIPG
Invites you

to a Bus Field Trip to Chicagoland



**Geology and the Making of
a Metropolis**

Guided by Michael J. Chrzastowski,
Ph.D., P.G.

Coastal Geologist with the Illinois State
Geological Survey

When: Saturday, September 25, 2010, 8:00 am to 5:30 pm.

Where: Departs from the NIU's extension campus in Hoffman Estates, IL

This full-day field trip traverses a major part of northern Chicagoland along the Lake Michigan shore from Illinois Beach State Park to Navy Pier and Chicago Harbor. Participants will learn about the geologic setting of the area and its influence on Chicagoland's growth and development; some of the geo-engineering challenges; grand scale development projects; and construction of one of the engineering wonders of the nineteenth century.

**Field Trip Cost of \$65 including Transportation, Lunch, Snacks and
Guide Book**

**RSVP by September 20th: Call (815) 395-1221 or Email
r.cornea@comcast.net**

**To hold your spot, please mail a Check payable to AIPG IL-IN Section
at 5704 Inverness Drive, Rockford, Illinois 61107**

Fall 2010 IGA Student Grants

A primary goal of the Illinois Groundwater Association is to foster groundwater scholarship. One way we support this effort is through the student grants page on the IGA web site: <http://illinoisgroundwater.org/sgrants.html>. The IGA has granted over \$14,000 in direct financial support to deserving students since 1987.

Student grant applications are accepted in the spring and fall of each year, and for fall 2010 we anticipate awarding at least two grants worth a maximum of \$500 each. The fall application deadline is Friday November 12th.

Any undergraduate or graduate student registered for full- or part-time study at an accredited college or university in Illinois is eligible to apply. Notifications have been sent out to many eligible institutions, and we encourage students to submit their applications as early as possible. The application form and guidelines can be obtained the IGA web site or from:

Edward Mehnert

IGA Grants Coordinator
Illinois State Geological Survey
615 East Peabody Drive
Champaign, IL 61820
217/244-2765
Fax 217/244-2785
mehnert@isgs.illinois.edu

Benefits of the IGA student grants go well beyond monetary support for research. As part of the grant conditions, students present

NOTE: The IGA received no requests for student grants for spring 2010. This is unfortunate since it highly likely there are deserving undergraduate or graduate students in Illinois that could use financial assistance with their research. If IGA members are aware of deserving students please have them contact Ed Mehnert at the address above.



Student grants help prepare the next generation

their findings at an IGA meeting - a great opportunity to improve professional presentation skills in front of a supportive and interested audience.

Overall, involvement in the IGA gives students a chance to network with groundwater professionals in academia, government and industry, learn about relevant issues, improve your resume and hone your skills. After all, improving groundwater knowledge is one of the IGA's primary goals.

Support IGA with Your Membership Dues

Membership in the IGA is open to anyone interested in the groundwater resources of Illinois, and dues help the IGA meet its educational and charitable mission. Professional member dues are \$25, and student membership is \$5 per year. With your membership dues, you support the IGA. We offer several convenient ways to pay: cash, check or now online at <http://illinoisgroundwater.org/join.html> with a credit card or PayPal account.

We encourage you to pay online, because it is the quickest and simplest way to help the IGA. Using this payment method also gives you the choice of selecting a recurring or single-year subscription. Never worry about forgetting to pay your dues again!

If you prefer to pay by cash or check, please complete the http://illinoisgroundwater.org/forms/Membership_Form.pdf on the web site or the form below. **Please make checks payable to the Illinois Groundwater Association.** Cash or check memberships expire on December 31st of each year. Online memberships are for 12 months from the date of payment.

	COST	Name: _____
Renew Membership	\$25	Position: _____
New Membership	\$25	Employer: _____
Student	\$5	Address: _____

		Phone: _____ Fax: _____
		E-mail: _____

Clip this form and send with payment to:

Dr. Steve Bennett
Associate Professor, Department of Geology
Western Illinois University
1 University Circle
Macomb IL 61455
SW-Bennett1@wiu.edu

IGA Meetings – Get Your CEUs Here

Continuing education units (CEUs) are required for many Illinois professionals. The IGA Fall 2010 program has been approved by the Illinois Department of Public Health as meeting the annual three-hour training requirements for local health department water program personnel as specified in the Local Health Department Grant Protection Rules, Section 615.320 (c) 2. Interested Sanitarians can attend the meeting and have an IGA officer sign their program to show attendance.

The IGA has also has approval from the Illinois Environmental Protection Agency, Bureau of Water, Division of Public Water Supplies/Operator

Certification to provide CEUs for drinking water operators.

Other professions also can use the IGA's meetings for CEUs. For instance, Illinois Professional Engineers (PEs) can attend IGA meetings for CEUs.

Some educational programs require that our meeting agenda be preapproved. Be sure to ask an IGA officer in advance if your educational program is included. If it isn't, we'll work with you to meet your educational needs!

Fall 2010 IGA Meeting Registration

Please return a form for each person attending. Registration includes a continental breakfast, a catered lunch and afternoon refreshments. **If you aren't a member yet, become one and save up to \$35 on meeting registrations this year!** Send this information to Steve Bennett, IGA Treasurer, by Friday September 17th, 2010 by mail, e-mail, or fax (see information below) to qualify for early registration. Make checks payable to the Illinois Groundwater Association if registering by mail, or pay at the conference if registering by email or fax. For faster and simpler registration, register online at: <http://illinoisgroundwater.org/meetings/meetings.html>.

Early Registration (received by 9/17/2010)

Member: \$65.00
 Non-Member: \$100.00
 Student: \$20.00

Late Registration (after 9/17/2010)

Late Member: \$75.00
 Late Non-Member: \$110.00
 Late-Student: \$20.00

Contact Information

Name: _____

Position: _____

Employer: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

IGA Membership

Membership in the IGA is open to anyone interested in the groundwater resources of Illinois and dues help the IGA meet its educational and charitable mission. Professional member dues are \$25, and student membership is \$5 per year. We offer several convenient ways to pay: cash, check or now at the IGA web site (<http://illinoisgroundwater.org/join.html>) with a credit card or PayPal account.

Membership Dues

(Re)new: \$25.00
 Student: \$5.00

Send registrations and memberships to:

Dr. Steve Bennett
 Associate Professor,
 Department of Geology
 Western Illinois University
 1 University Circle
 Macomb IL 61455
SW-Bennett1@wiu.edu

Contact Information

(if same as above, check here)

Name: _____

Position: _____

Employer: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

Provisional Agenda
**Illinois Groundwater Association
2010 Fall Meeting**

September 24, 2010
NIU-Hoffman Estates Campus, Hoffman Estates, Illinois

- 8:45 – 9:15 Registration
- 9:15 – 9:30 Opening Remarks, **Steve Kroll**, IGA Chair
- 9:30 – 10:00 **Yi-Chen E. Yang and Yu-Feng F. Lin**, *Illinois State Water Survey*, Managing Water Resources Using WebGIS: Development and Application of an ArcGIS Explorer Toolkit for McHenry County
- 10:00 – 10:30 **Jack Wittman**, *Wittman Hydro Planning Associates*, Managing the Risks of Irrigated Agriculture near Public Water Supplies: A Case Study near Lawrenceville, Illinois
- 10:30 – 10:45 Break
- 10:45 – 11:15 **Karel Waska**, *Northern Illinois University*, Extreme Alkaliphiles at Calumet - Environmental Study
- 11:15 – 12:00 **Michael Chrzastowski**, *Illinois State Geological Survey*, CHICAGOLAND – A Metropolis Site Determined by Glacial and Coastal Processes
- 12:00 – 1:00 Lunch & IGA Executive Committee Meeting
- 1:00 – 1:30 **Philip Carpenter**, *Northern Illinois University*, Non-Invasive Monitoring of Leachate Movement and Gas Migration within a Bioreactor Landfill Cell
- 1:30 – 2:00 **Hridaya Bastola**, *Illinois State University*, The Use of Tracer Test in Determining Hyporheic Flow Paths as an Aid in Streambed Thermal Modeling
- 2:00 – 2:15 Break
- 2:15 – 2:45 **Rick Cobb**, *Illinois Environmental Protection Agency*, Summary of Ongoing Challenges on Public Water Supply Safety: Results of Implementing the Groundwater Rule, SB 3070 MCL Prevention Law and Right-to-Know Law
- 2:45 – 3:15 **George Gaffke**, *Illinois Water Well Advisory Committee*, Geothermal Heating Systems Installation and Groundwater
- 3:15 – 3:30 Open for Comments / Announcements & Closing Remarks, **Steve Kroll**, IGA Chair
- 4:00 – 7:00 Social Event - Happy Hour and Dinner at Claim Jumpers Restaurant
2610 N. Sutton Road, Hoffman Estates, IL 60192 (847.645.6400)

Saturday, September 25th – IGA/AIPG One-Day Field Trip - “Geology and the Making of a Metropolis”

Hosted by Michael Chrzastowski, ISGS

**Motor coach to depart at 8:00 a.m. at the NIU Hoffman Estates Campus and to return at 5:30 p.m.*

IGA Officer Candidates for 2011

CANDIDATE FOR CHAIR: MS. DANIELLE WALLIN is an Illinois licensed professional geologist with Farnsworth Group, Inc. in Shorewood, Illinois. Danielle received a B.S. degree in geology from Eastern Illinois University (1999) and a M.S. degree in geology from Northern Arizona University (2001) with a geophysics emphasis. She specializes in water supply planning and resource evaluation, groundwater well design, Phase I and Phase II environmental site assessments, soil and groundwater characterization and remediation, permitting and project management.

CANDIDATE FOR VICE-CHAIR: DR. ERIC PETERSON is an Associate Professor in the Department of Geography-Geology and Illinois State University. Eric also serves as the Graduate Program Coordinator for the Hydrogeology Program. He received a B.S. in Earth Science and Mathematics and a M.A. in Mathematics from the University of South Dakota, a M.S. from the University of Arkansas, and a Ph.D. from the University of Missouri. His current research interests include groundwater-surface water interactions and karst hydrogeology.

CANDIDATE FOR DIRECTOR: MR. ALAN STONE received his B.S. in Water Resources Management (with geology and soil science minors) from UW-Stevens Point in 1991, M.S. in Earth Science from Western MI University in 1996, and M.S. in Environmental Engineering from Milwaukee School of Engineering in 2005. He is currently licensed as a professional geologist in Illinois and as an engineer-in-training in Wisconsin. His experience includes hydrogeologic site investigations, contaminant fate and transport calculations for soil and groundwater contaminants, wastewater and stormwater infiltration, and environmental site assessments in Illinois, Wisconsin, and Michigan. He is currently a hydrogeologist/environmental engineer with CES Group of Illinois in Bloomington, IL. His interests include hiking, fishing, church, and time with wife, friends and family.

CANDIDATE FOR SECRETARY: MS. DIANE LAMB has a BS in geology (2002) and an MS in hydrogeology (2004) from Illinois State University. Before returning to school, she worked for 10 years in accounting at Illinois Department of Transportation, then part-time while her children were small. She has worked in the professional geology/hydrogeology sector since 2005 with environmental consulting firms performing geologic, groundwater and environmental site investigations; IEPA permit work, geologic mapping and fieldwork that included drilling and QA/QC construction oversight, soil and groundwater sampling, aquifer testing and geophysics. She is currently working as a community college instructor for Earth science and environmental science courses.

CANDIDATE FOR TREASURER: DR. STEVE BENNETT received his B.S. (1988) in Geology from the University of Northern Iowa and both his M.S. (1990) and Ph.D. (1994) in Geology from Indiana University. Dr. Bennett joined the Western Illinois University faculty in 1994 and is an Associate Professor in the Department of Geology. He teaches courses in introductory physical geology, environmental studies, oceanography, hydrogeology, and geological field methods. Dr. Bennett is formerly a Director and Chair of the IGA and has served as its Treasurer since 2003.

CANDIDATE FOR STUDENT DIRECTOR: MR. KAREL WASKA is a Ph.D. student at Northern Illinois University. He received his BS in Natural Resources Management and Hydrogeology from Charles University in Prague. He also received MS in Hydrogeology from Charles University before coming to NIU. Currently, his research is focusing on determining microbial communities in the extreme alkaphillic groundwater and sediment in Calumet.

Illinois Groundwater Association

**BALLOT FOR THE ELECTION
OF 2011 OFFICERS**

Chair () Ms. Danielle Wallin

Farnsworth Group, Inc
Shorewood, Illinois

() _____

Vice-Chair () Dr. Eric Peterson

Illinois State University
Normal, Illinois

() _____

Director () Mr. Alan Stone

CES Group of Illinois
Bloomington, Illinois

() _____

Secretary () Ms. Diane Lamb

10300 Smithville Road
Hanna City, Illinois

() _____

Treasurer () Dr. Steven Bennett

Western Illinois University
Macomb, Illinois

() _____

Student Director () Mr. Karel Waska

Northern Illinois University
DeKalb, Illinois

() _____

Instructions: Place an "x" in the box opposite to the candidate of your choice. If you prefer to vote for a candidate not listed, write the name and business affiliation of the candidate of your choice in the space provided and mark with an "x". Write-in candidates must be members of the IGA. Mail or e-mail the completed ballot to:

Diane Lamb
10300 Smithville Road
Hanna City, IL 61536
(309) 256-2199
Email: dianemlamb@gmail.com



Feature Article

Be a Part of the Chicagoland Learning Adventure!

A Motor Coach Tour of How Geology Influenced the Chicago Metropolis

By Michael Chrzastowski, PhD, Senior Coastal Geologist, Illinois State Geological Survey

The Chicagoland landscape tells a unique geologic history on the North American continent of glacial, fluvial and coastal processes. Glacial ice contributed to the forming of end moraines and the resulting inter-morainal valleys that would become the pathways for much of the regional drainage network. Changing water level of glacial Lake Chicago and ancestral and modern Lake Michigan combined with wave erosion and the transport and deposition of littoral sand resulted in shaping and reshaping the land-lake interface. The net result of these varied and interacting processes was a natural waterway passage between the Great Lakes and Mississippi River watersheds. This was the landscape factor that predestined the region to be an important mid-continent focal point for water



All land bordering the water in this view is manmade land resulting from lakefilling and artificial sand accretion that began in the 1830s. The naturally occurring low-slope nearshore and thick till substrate made the filling possible.



The mouth of Dead River and surrounding land at Illinois Beach State Park mimics the pre-settlement setting of the Chicago River mouth.

transportation and commerce. Wave action and associated transport, deposition and erosion of lakeshore sand determined where the mouth of the Chicago River would be located along the Lake Michigan shore. This in turn set the stage for what is now the Chicago Loop and the central business district. Without question, Chicago – the largest metropolis in the central North American continent – is a product of its geology.

A full-day field trip will be held Saturday, September 25 to experience and “read” the Chicagoland landscape and the story it tells related to the growth of this metropolis. This trip is sponsored by the AIPG in cooperation with the Illinois Groundwater Association. The trip will be aboard a 55-passenger

motor coach with stops at select spots of particular significance and for restroom convenience. This will be a field trip design that is a bit unusual for geology field trips. The motor coach will serve as a moving observation platform and a running narrative by the trip leader will point out notable features being passed. The guidebooks for the trip essentially functions as a laptop computer with maps and other graphics explaining the geologic relevance of the passing landscape.

I will have the honor and privilege of serving as trip leader for this excursion. My primary research focus for the past 20 plus years has been the geologic history of the Illinois coast of Lake Michigan and the late glacial history of Chicagoland. I first did this particular field trip in 2005 for the annual meeting of the Association of American State Geologists (AASG). The trip proved to be a

Feature Article

Be a Part of the Chicagoland Learning Adventure!

**A Motor Coach Tour of How Geology Influenced the Chicago Metropolis
(continued)**

memorable and informative experience for those having local geologic knowledge as well as the visiting geologists from across the country. All agreed this field trip was an enjoyable learning adventure to understand the geologic reason for Chicagoland and appreciate Chicago from a geo-perspective.

So what will this trip entail? The trip will begin at 8 AM on Saturday morning, September 25, at the Northern Illinois University (NIU) Conference Center in Hoffman Estates. The motor coach will head north up the Des Plaines River Valley and cross the headwaters of the Chicago River. At Illinois Beach State Park we will have a short beach hike to the mouth of Dead River



North Avenue Beach on Chicago's Near North Lakefront is one of the most successful engineered beaches in the nation.

which is a setting that mimics what the mouth of the Chicago River was like when European explorers first passed through Chicago in the 1600s. Our lunch stop will be along the scenic bluff coast of Chicago's North Shore where wave erosion and ravine development have cut into the Highland Park Moraine.

Continuing southward the motor coach will descend onto the Chicago lake plain which was submerged to varying degrees at higher lake levels in late glacial and post glacial time. We'll cross

two of the prominent spits in Chicago's North Side suburbs that formed in early to mid-Holocene time by wave transport of sand. Reaching the Chicago lakefront we'll learn how the geologic setting made it possible for the extensive lake filling that was necessary to engineer this world-famous urban shoreline. We will examine the evidence of how the land of the Chicago Loop was raised in elevation from its original setting of marsh and sloughs. Heading west we will retrace the route of one of the two glacial sluiceways through which glacial Lake Chicago drained to the Mississippi River watershed. Our late afternoon return to the Hoffman Estate starting point will complete an approximate 140 mile narrated and illustrated tour of geology, history, economics and culture.

Cost for this full-day field trip is \$65 which covers the motor coach transportation, full-color 64-page guidebook, box lunch, snacks and drinks. Free parking is available at the NIU Hoffman Estates Conference Center which is the start and finish point. Walking is minimal and optional during the field trip, and thus persons with walking limitations are easily accommodated. Space is limited by the 55 seats of the motor coach. Register early to assure your motor coach seat for this learning adventure!

Illinois Groundwater Update

Northeastern Illinois Water Supply Plan

Summary based on the executive summary of the Water Plan:
<http://www.cmap.illinois.gov/watersupply/default.aspx>

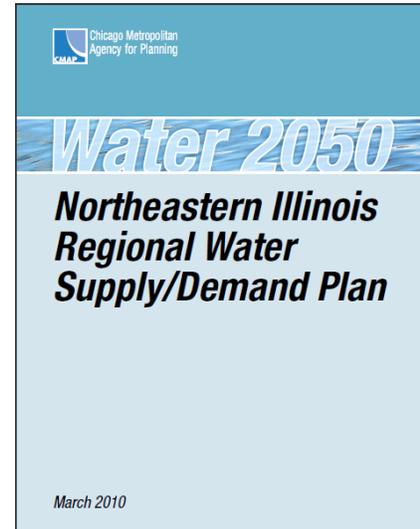
The Northeastern Illinois Regional Water Supply/Demand Plan (hereafter called the Water Plan) was published by the Chicago Metropolitan Agency for Planning (CMAP) in March 2010 (<http://www.cmap.illinois.gov/watersupply/default.aspx>). This plan is the result of a three year planning effort between CMAP and the Regional Water Supply Planning Group (RWSPG) in response to Executive Order 2006-1, which called for the development of regional water supply plans for two priority planning areas. One of the planning areas was the 11-county northern Illinois region, which was identified as a priority planning area due to regional population growth. Prior to 2006 this region did not have an interest-group or state endorsed or funded water supply plan in place. The Water Plan acknowledged that

although the Chicago region is blessed with ample fresh water that the region cannot assume that water supplies are infinite. Further, fresh water supply is critical to economic competitiveness, economic development, environmental protection, and social equality. The purpose of the Water Plan is to carefully plan and manage its surface water and groundwater resources in a coordinated fashion.

CMAP formed the Northeastern Illinois RWSPG in 2006 with the Illinois Department of Natural Resources (IDNR). The RWSPG was advisory in nature and included 35 delegates representing nine different stakeholder-interest groups. CMAP and the RWSPG held near-monthly public meetings.

The RWSPG adopted the following goals in order to achieve their mission:

1. Ensure water demand and supply result in equitable availability through drought and non-drought conditions alike.
2. Protect the quality of ground- and surface-water supplies.
3. Provide sufficient water availability to sustain aquatic ecosystems and economic development.
4. Inform the people of northeastern Illinois about the importance of water-resource stewardship.
5. Manage withdrawals from water sources to protect long-term productive yields.
6. Foster intergovernmental communication for water conservation and planning.
7. Meet data collection needs so as to continue informed and effective water supply planning.
8. Improve integration of land use and water use planning and management



Illinois Groundwater Update

Northeastern Illinois Water Supply Plan (continued)

The Water Plan does not make recommendations aimed at changing the existing governance structure for water supply planning and management. Nor does the plan focus on capital projects. The Water Plan makes recommendations that are designed to be voluntarily implemented by a variety of stakeholders within the existing institutional structure of water supply planning and management. The plan depends entirely on voluntary action and cooperation among those entities identified by recommendations.

Coal Slurry and Groundwater

Coal mine slurry is a byproduct of washing coal after it is mined and before it is delivered. The slurry can contain heavy metals and other pollutants. The December 22, 2008 coal slurry release disaster in Harriman, Tennessee, has prompted investigation into other slurry disposal options, including injecting slurry into underground coal mines. However, environmental activists and residents questioned whether injecting coal slurry underground would contaminate water supplies. Slurry injection in West Virginia has resulted in lawsuits that claim groundwater contamination.

The IDNR has indicated that Illinois geology is more favorable to underground disposal of coal slurry due to flat topography and geology, and since most Illinois coal mines are dry and "tight". By contrast, West Virginia has a mountainous topography and warped layers of rock. Mines in West Virginia are often interconnected, with water wells that extend into the coal seams. Illinois mines are generally not connected, and wells are not likely to be within the coal-bearing units.

Slurry injection in to coal mines would be permitted, which would examine the specific geology of the site and adjacent water uses to determine if coal slurry injection would be safe. The evaluation would also evaluate if there is 'communication' between mined areas and aquifers, with water level monitoring to assess water movement.

The IEPA released the *Ash Impoundment Survey Progress Report* (<http://www.epa.state.il.us/>) on August 4, 2010. Ash impoundments have been required to be lined since the early 1990s, and groundwater monitoring has been installed at some facilities. The report identifies the number of active and inactive impoundments, how many are lined, and how many have groundwater monitoring. In addition, the report used regional maps that identify susceptibility to groundwater contamination and the presence of nearby potable wells to determine the potential for groundwater contamination. This assessment was used to develop assessment priorities.

Summarized from <http://www.sj-r.com/firstinprint/x1953793097/Debate-continues-over-how-to-dispose-of-coal-slurry> and <http://redgreenandblue.org/2008/12/23/coal-slurry-disaster-in-tennessee-is-largest-ever/>

Illinois Groundwater Update

Geology Intern Bill Signed into Law

Bill Dixon, CPG-3659, Practical Environmental Consultants, Inc.

On July 27, Governor Quinn signed HB6001 REGULATION-TECH into Public Act 96-1327. The full text of the bill can be accessed on the State of Illinois website; click on Bill and Resolution Search, then HB6001. Twenty-three Sections of the Professional Geologist Licensing Act were modified in some way, mostly in capitalizing "Licensed Professional Geologist". (The printer friendly version is 27 pages.)

The substantive changes to the Act allow candidates for licensure to take the Fundamentals of Geology (FG) examination after receipt of the bachelors degree, or in the final semester of a program leading to the degree. The pertinent sections of the Act that were revised for this purpose were Sec. 20 (k), Sec. 45, Sec. 50 (c), and Sec. 54. The way is now clear for the Board of Licensing to promulgate regulations that will allow this to happen.

The Department of Financial and Professional Regulation had been initially opposed to the bill because it had been written to establish a new official category of "Geologist Intern". Administratively, it is quite costly (\$50,000) to do this. Once this stumbling block was identified, alternative language was worked out to allow candidates to take the FG examination without having to wait until they had gained the required four years of professional experience. Persons with less than the four years of experience who have passed the FG examination may call themselves "interns" or "trainees".



Bill Dixon

NIU Launches Environmental Program

Melissa Lenczewski, Interim Director, ESE Institute

NIU is in the second year of developing an institute for the study of the environment, sustainability and energy. The comprehensive education and research program will focus on issues facing the environment in Illinois, and especially water issues. Starting in August 2010, students will be able to enroll in the newly updated Environmental Studies minor and in new environmental studies courses. Students will learn to apply foundational and theoretical knowledge from engineering, the humanities and the natural and social sciences to current environmental issues and policies.

Environmental Studies offers both a B.A. and a B.S. degree for a major in environmental studies. The major in environmental studies is designed primarily for students seeking a career in identifying the causes, scales, and remediation and mitigation approaches to major local, regional, and global environmental problems. One of the main emphases of the new curriculum is in water. Students will be trained in all aspects of water. It is essential that students pursuing environmental studies are well grounded in the economic, legal, physical, and biological facets of water resources. New courses are being developed in water quality bring together faculty from biology, geology and public health. In the future we hope to expand with new faculty hires in water. More information on our program is available at www.niu.edu/envs.